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Understanding Third World Food Systems

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Abstract

This paper discusses the characteristics of developing country food systems and points out some of the major differences from those of industrialized countries. The topic is addressed from three perspectives which, because of the often overlapping functions in Third World food delivery chains, are not completely discrete. These are: agroindustry, food marketing and street foods. A final section suggests that what are viewed as major problems by many planners may in fact represent opportunities on which to build more effective and efficient servicing of consumer needs and create economic growth.

Introduction

Food systems in developing countries are substantially different from those we find in Canada. While food production and processing in North America is highly mechanized, produces many higher value processed products, and employs a relatively small proportion of the total population, the same functions in developing countries generally involve simpler, cheaper products and processes and employ a larger proportion of the population. United Nations (1983) statistics show that the food processing industry alone in developing countries is a major employer, particularly in the poorer countries, engaging in the range of 20-30% of the work force. These figures are probably underestimates as they deal with only the formal sector enterprises which show up in government statistics and ignore the large number of small individual food processing and marketing enterprises which, flourish in almost all cities, towns and villages of developing countries.

Characteristics of food systems in developing countries are discussed below from three perspectives: agroindustry, food marketing, and street foods. The final section focuses on opportunities for building on both small and larger enterprises to create economic growth.

Agroindustry

Agroindustries large and small process agricultural raw materials of food and fibre into more usable or edible forms. These processes may improve storability, create a more easily transportable form and enhance palatability or nutritional value. Austin (1981) points out that agroindustrial processes are unique in a nation's manufacturing sector because they deal with raw materials that are seasonal, perishable, and variable. Supply of raw material is often available only during one or two brief periods of the year while demand for the final product is relatively constant. The supply and demand imbalance requires storage and inventory management, production scheduling, and co-ordination between production, processing, and marketing. The raw materials dealt with are often perishable and quite fragile. This requires speed and care in handling and storage to maintain physical and nutritional quality. Agricultural raw materials also vary in quantity and quality from season to season because of weather changes and damage caused by other factors such as pests and diseases. A well-co-ordinated post-production and agroindustry chain serves to smooth out these difficulties.

Agroindustry contributes in a major way to the development of a nation's manufacturing capability and income. It is particularly important in the economies of lower-income countries, declining in overall importance as industrial and economic development proceed. The initial stages of industrialization draw on a country's natural agricultural endowment and

then diversify in subsequent stages into non-food and fibre products, often as import substitution activities. As incomes rise, the per capita consumption of processed foods and value added per employee in food and beverage industries tend to rise. Urbanization leads to greater processing and the mix of foods shifts to those requiring greater transformation in response to demands for convenience, storability, and attractiveness (Austin, 1981).

Small-scale agroindustry enterprises are particularly important in low-income countries where they provide most of the jobs in the manufacturing sector. Frequently, they afford employment opportunities for women both in processing and distribution. For example, 25% of the workers in the food and beverage industry and 60% in the tobacco industry of India are women. In Sri Lanka, women make up 42% of the labour force in the food and beverage industry (UNIDO). There are also spinoffs in the commercial sector, financial sector, service industries, and businesses manufacturing or distributing agricultural production inputs.

On visiting a developing country, an observer from the food industry of an industrially-advanced country is likely to encounter processing facilities not greatly different from those familiar in his own country. True, the plants may be somewhat smaller, somewhat less efficient, equipment a little older and throughput probably less than rated capacity. This is not always the case, however, as some of the most modern, well-run and efficient operations may be observed as well.

These plants are likely to process agricultural products for export or for the higher income groups in the local economy. Typical of the export-oriented industries are fish, oils and fats, sugar, fibre such as cotton, and processed and semiprocessed food products such as meat, fruits and vegetables. Other large urban-based plants produce dairy foods, beer and processed fruits and vegetables, mostly for the higher-income local market. Of significant importance is the milling and cereal processing industry which transforms large quantities of local and imported grains for mainly urban markets (Edwardson, 1985). With the exception of the latter, these industries have only a small impact on the food supplies of the low-income majority of local populations.

What will not be obvious to an industrialized country observer, unless he is specifically interested, is the role of thousands of cottage and small-scale plants, even on-street processing, which are commonly scattered throughout rural and urban areas of most Third World countries. Over 80% of food plants in developing countries are very small scale and family-operated (Edwardson and MacCormac, 1984). These small businesses utilize local raw materials, provide local employment and make available popular foods at convenient locations and affordable prices for the majority of the population. Common products of these small businesses might be steamed baked goods, various snacks, bakery products, cheeses, soy sauce, noodles, fish pastes, fermented cereal beverages, and confectionery. These foods may also be produced by local larger-scale plants but are usually more expensive, targeted at the more

affluent consumer able to pay for the perceived higher quality, more expensive packaging and marketing costs associated with a larger, more centralized enterprise.

Food Marketing

An integral and important part of food systems in developing countries is that of the marketing and distribution of a wide variety of products. This function can be stratified by the economic status of the clients served as follows:

1. Rural Semi-Subsistence;
2. Rural Small Town and Village;
3. Urban Markets of Medium- to Large-Size Cities
 - a) Upper-Income Clientele
 - b) Low-Income Clientele.

These categories of course are not completely mutually exclusive but they do represent a general pattern described in more detail below.

1. Rural Semi-Subsistence

This level of activity is characterized principally by home-processing of family-grown agricultural products for their own consumption usually employing hand tools and processes. Some primary processing may also be done in the form of cleaning and sorting, drying, and cutting as in the

case of meat and fish. A portion of the family production is sold for cash income to purchase items which cannot be produced within the household. Production surpluses are sold in small lots either at a local village or periodical market by the farmer or sold to an intermediary who bulks up the commodities for resale in a larger market. Quantities and quality of product fluctuate greatly. While not completely integrated into the cash economy of a country, these people are still an important part of the food system in both production and consumption.

2. Rural Small Town and Village

In these markets small processing enterprises and home processing of raw materials both occur. Some secondary processing is also carried out and products are sold directly to consumers either for immediate consumption or for further preparation at home later. These markets are characterized by public markets, bazaars and periodic fairs where stall tenants supply most of the consumer staples bought by low income families. Small family-owned fixed location housefront stores are also common along with a few larger shops carrying a greater variety of items including some expensive canned and processed food items.

3. Urban Markets of Medium- to Large-Size Cities

a) Upper-Income Clientele

These are similar in many ways to what is normally found in industrialized countries with a high level of infrastructure development. Supermarkets are common and sell a wide range of processed foods. These are produced by large modern as well as by some smaller traditional plants. A range of imported products is also usually displayed.

b) Lower-Income Markets

Products sold here are from many small and a few large processors and some on-the-spot processing is done. Products are low in price, variable, often of low quality and available at many locations. Itinerant vendors of raw materials as well as ready-to-eat products are ubiquitous.

The lower-income oriented food marketing systems in both urban and rural areas are often regarded as inefficient because of their highly fragmented structure. At the retail level, many neighbourhood stores with narrow and fixed trade areas carry limited product lines, have poor sanitary conditions, and often use inaccurate measurement tools. Prices for goods in these stores, especially processed food may be relatively high because of the long supply chain involving many intermediaries.

The existence of these shops can be explained by the characteristics of low-income developing country consumers. Low incomes tie these individuals to traditional vendors, shops and public markets where obtaining credit will be easier. Limited storage capacity of the typical household and lack of refrigeration require frequent purchase of food and limited transportation facilities force consumers to buy within easy walking distance of their residence. Some may also not wish to pay for the additional services offered by more modern stores.

For some planners the solution to this problem has been the introduction of horizontally and vertically integrated systems as embodied in Western-style supermarkets. They have been touted as providing substantial benefits from economies of scale and shortening of the distribution channel. They supposedly help bypass the public wholesale markets, replace the crowded, oldfashioned, noisy, disorderly food stands in municipal retail bazaars as well as do away with street vendors who are considered to cause health and safety hazards in busy areas (Meissner, 1980).

Experience has shown, however, that supermarkets are only functional in mid- and high-income neighbourhoods where customers can afford to buy packaged merchandise on a cash basis. This marketing technology has turned out to be too large and too expensive for the majority of low-income consumers and does not create a great deal of employment for rapidly expanding labour forces.

Street Foods

Another aspect of Third World food systems is the proliferation of street food vendors found in most urban areas. Studies done in four cities in the Philippines, Indonesia, Bangladesh, and Senegal have highlighted the importance of these activities to their national economies. Street foods are a vital part of the food systems whose micro-processing and micro-marketing activity has implications for agricultural production, food processing and food distribution. It may also provide a mechanism for introducing new foods and for reaching school children and others in feeding and nutrition programs (EPOC, 1985).

Results of these studies show that small firms, often single individuals, provided relatively good income opportunities, and offered employment to a significant portion of the urban labour force, especially women. They also absorb an important amount of agricultural produce, and furnish low-cost, nutritious food to a variety of consumers. Because of growing urban employment at some distance from place of residence, and the rapid expansion of female participation in the labour force to augment family incomes, the demand for food prepared outside of the consumer's household has increased. This has provided many opportunities for street food entrepreneurs to ply their trade. The ability to provide meals and snacks at affordable prices, due to low overheads and make them available at convenient locations has allowed these enterprises to proliferate and persist inspite of opposition from many local health and trade authorities.

Clientele of the street food processors and vendors are frequently participants in the same informal sector of the economy as the vendors themselves. By number, they comprise a major group of consumers even though their individual purchasing power is not that great. Many urban women, as well as men living alone, find it more advantageous to use their time in income-generating activities and to purchase street foods rather than to shop for and cook traditional foods which are time-consuming to prepare and perishable. In addition, the elevated costs of fuel and ingredients, especially in times of food scarcity, have made daily household meal preparation prohibitively expensive. Many find it cheaper to purchase street food meals where some economies of scale bring the price of a serving below the cost of home preparation (EPOC, 1985).

Other important consumers of street foods are students who live away from home and often elementary level pupils. The latter, a target group in school feeding programs, often purchase breakfast on the way to school. In a study in Ife-Ife, Nigeria, it was shown that 76% of school children eat two street food meals a day and 96% eat street foods for breakfast (EPOC, 1985). A household survey conducted in Iloilo City in the Philippines showed that 30% of household food expenditures were devoted to prepared food purchased outside. Approximately two-thirds of these expenditures were made at street food establishments. These establishments also sold to people living outside the city and who were visiting for various reasons. Even relatively higher-income people often prefer to make purchases at these informal sector enterprises.

This is not to say that all is well in the street food trade. Sanitation and cleanliness are major problems. Congestion is another in areas of high concentrations such as bus terminals and public markets. Because street food enterprises are, for the most part, ignored or opposed by local authorities, no licencing or systematic structuring of the activities is apparent which would help control some of the worst food quality, health and public order problems. It should be recognized though that many of the unacceptable practices of street food vendors are part of the general environment and conditions within which they function. It is difficult to observe good sanitary practices if clean water and regular garbage removal are not available.

Opportunities

There are major structural, efficiency, organizational, distributional, social and equity problems inherent in existing third world food systems. Ignoring the problems and the system in which they are rooted in favour of models imported from other societies with different characteristics will not make them go away. This is evident in the negative experience with supermarkets in low-income neighbourhoods (Meissner, 1980). Unfortunately, planners and technical assistance agents do not have a close association with the large low-income community they wish to assist. Assumptions are made about the needs and wants of people without consciously considering whether these are, in fact, reliable. There is a technology and equipment fixation without enough attention being paid to people with specific characteristics and

needs. In the industrialized world, a company overlooks these characteristics of its clientele at its own peril and as a result, a great deal is spent on market research and development.

Opportunities are often derived from identified problems. One must, however, be looking in the right place and find ways of asking the right questions if dynamic solutions are to be found. Key questions that need to be asked in the context of improving Third World food systems are: What is the problem? Who has the problem? Who will receive the major benefits of potential solutions? And how will those benefits be realized? In this context, the application of modern marketing techniques would seem to have considerable potential. Some adaptation in their use is likely to be necessary particularly in the area of financial analysis and selection of objectives. There is a major difference between calculating the financial return and profit on a project to a few large entrepreneurs to looking at market possibilities for a large number of small enterprises which will provide improved or new products and services locally at an affordable price. When dealing with many small processors standard financial analysis may not always be useful in making a decision about feasibility. The Equity Policy Centre studies (1985) showed that, in general, incomes of street food processors and vendors were often two to three times higher than minimum wage employment in which these people might otherwise be engaged, if available. There was also evidence that investment in micro-economy small enterprises has a higher benefit-cost ratio than investment in modern industry.

There is no doubt that the structure of present food systems in developing countries has to change and is in the process of change. The challenge is to guide this change for the benefit of as large a number of people in a society as possible. As we have seen, food systems enterprises are at the core of a nation's economic and industrial development. Improvements may be found in a better integration of large and small-scale enterprises in serving well-identified consumer needs. Before this can happen, however, the small-scale enterprise sector must develop better cohesion and a stronger bargaining position to effectively deal with larger enterprises.

A major strength in the small-scale sector is the individual entrepreneurial spirit of its constituents. On the other hand, a major problem in promoting changes is the large number of participants to reach if any improvement program is to be introduced. One possible way of dealing with this problem is through the encouragement of local trade associations. The idea of some form of franchising association able to provide technical assistance, set standards, supply inputs, provide a trade name and engage in strategic market thinking is an idea being explored in a number of local situations. For some commodities, medium-size enterprises might focus on providing low-cost partially processed but standard quality inputs to the micro-enterprises serving low-income customers. In a reverse way, small rural processors can supply partially processed, more stable products to larger urban industries. Improving the service supplied by small merchants and intermediaries, rather than trying to control or eliminate them, might also be effective.

These are only a few of many possible opportunities which might be identified and developed through a better focus on the needs of the large and still-growing low-income sector of developing country populations. Modern, large-scale processing and marketing establishments will continue to be important for the more affluent and export markets. However, they can't adequately serve the needs of low-income consumers in terms of employment and low-cost food products. As long as employment opportunities for large numbers of people are scarce in capital-intensive enterprises, and wages are very low, micro- and small family operations will persist. But as opportunities for these people to improve become available, and the whole agriculture and food-related sector of the economy expands, greater integration and incomes can be expected. If we look back on our own history, we are likely to find a very analogous situation. Real growth and equitable economic development depends on creating opportunities for many people to improve their situation and contribute to their society. Many of these opportunities must come from agriculture and food-based enterprises.

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